**Fiscal Year 2001**
**Alaska District Success Stories**
**Fort Glenn FUDS, Dutch Harbor C3 Zone**

**FUDS PROJECT NAME:** Fort Glenn
**FUDS NO.:** F10AK0298-02
**LOCATION:** Umnak Island, Alaska

## PROJECT DESCRIPTION

Fort Glenn is located on Umnak Island, in the Aleutian Island Chain. In 1942, the U.S. Army established Fort Glenn as one of 11 military installations that supported the Dutch Harbor Defense Site during World War II (WWII). The base, comprising over 100,000 acres, had three operational airfields, as well as troop quarters and support facilities. The strategic significance of Fort Glenn lessened as the Aleutian Front moved farther out the chain toward Amchitka and Adak. Military operations were discontinued in 1945 and the site has remained abandoned since that time.

### HISTORICAL SIGNIFICANCE

In recognition of its significant role during WWII, the area of Fort Glenn, owned by the State of Alaska Department of Transportation (ADOT), was designated as a National Historic Landmark (NHL). All WWII buildings, airfields, hangars, roads, docks, and landscape features within the main cantonment portion of Fort Glenn are contributing resources to the NHL. Remains of wood frame buildings and Quonset huts are found throughout the site. The remains of a complex system of pipelines and aboveground fuel storage tanks also can be seen. Other WWII items include ammunition bunkers, Arctic huts, wooden walkways, radio equipment and towers, observation/command structures, coal stockpiles, and remnants of the gun emplacements. Unexploded ordnance (UXO) was recently discovered in open burn/open detonation (OB/OD) areas of the site.

### OVERCOMING SITE-SPECIFIC CHALLENGES

Previous site investigations and visits had identified the presence of potential sources of contamination, including transformers, drum disposal areas, aboveground storage tanks (ASTs), underground storage tanks (USTs), buried fuel piping, dry cleaning facilities, and landfills. Due to the remote nature of the site, significant logistical challenges were faced during the performance of the investigation actions.

An advance team was mobilized to the site on an L-100 cargo aircraft (a civilian version of a C-130). The advance team mobilized with vehicles, fuel, and a temporary remote camp to begin site reconnaissance activities. Other personnel on the advance team arrived by a cargo barge that carried the full camp, in addition to all equipment and fuel required to perform the investigation. The remote camp facilities housed 25 persons, and bi-weekly cargo re-supply and sample- shipping flights were scheduled to ensure the continued provisioning and success of the field effort. Despite the delay or cancellation of many flights due to weather, all samples shipped met holding times, as a result of the close communication between the remote camp and the Anchorage office.

### PROTECTION OF HISTORIC AND CULTURAL RESOURCES

Because the Fort Glenn NHL also contains many archaeological sites, the contractor worked closely with two USAED onsite archaeologists to prevent any disturbance of cultural and historic resources. Close coordination by USAED with stakeholders, including landowners, the State of Alaska Office of History and Archaeology, the National Park

Drum Disposal Area

Service, and ADOT also helped to ensure protection of these resources.

Equipment such as a drill rig on tracks and a Geoprobe® were used to minimize impact to the cultural landscape. The investigation techniques employed provided for optimum utilization of this equipment. For example, the Geoprobe® unit was used with a field-screening device called a membrane interface probe (MIP), which allowed real-time data to be gathered on soil-gas vapors. Data generated from the MIP was used to determine where boreholes and monitoring wells would be drilled in the tank farms. Another field-screening device, an infrared spectrophotometer, provided screening data that was used to further delineate the areas where analytical samples would be collected. Test pits were dug with a backhoe in the areas that the drill rig could not access or where shallow bedrock was encountered. The use of the field screening technologies provided cost-effective real-time decision making, resulting in maximum utilization of the drill rig for collecting soil and groundwater samples.

**NATURE OF SUCCESS**

The environmental investigation conducted at Fort Glenn presented many logistical challenges associated with its remote location and NHL status. Extensive planning and preparation, combined with intensive coordination between the Anchorage office and the onsite team, ensured the success of the project. The safety consciousness and the flexibility of field personnel in adapting to the challenges associated with working in the Aleutian Islands were the major contributing factors to the success of the Fort Glenn project. The use of low-impact vehicles and innovative field screening technologies enabled the investigation of as many sites as possible in the time allowed.

## POINT OF CONTACT

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